AMSAT News Service Weekly Bulletins
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SB SAT @ AMSAT $ANS-008.01
PoSAT-1 BBS TO OPEN

HR AMSAT NEWS SERVICE BULLETIN 008.01 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 8, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-008.01

PoSAT-1 Opens For Radio Amateur Use

As many of you may already know, PoSAT-1 was built at University of Surrey and is owned by a Portuguese Industrial Consortium. It carries a commercial and an Amateur Radio payload. The Amateur Service hasn't yet started operation because of some doubts about the use of PoSAT-1 were brought up because of the the possiblity of misuse of the Amateur Radio spectrum.

AMSAT-PO (the Portuguese AMSAT "branch") and others were very worried about this situation, and after a few setbacks and many meetings, a protocol was finally established between the PoSAT Industrial Consortium and AMSAT-PO on 6-DEC-93. The main concern of AMSAT-PO was always to protect the Amateur bands and the Amateur code and practice.

Jose Carlos (CT1ERC) has provided the main points of that agreement which are as follows:

* RAM memory allocated to the Amateur store-and-forward BBS: at least 6 MB out of a total of 16 MB;

* The operating schedule (between the commercial and Amateur service) will be valid for two years and may be re-negotiated every two years;

* The Amateur ground stations are allowed to download all the files related to the technical and scientific experiments onboard, but by imposition of the Consortium, the IMAGES TAKEN BY THE ONBOARD CCD CAMERAS WILL NOT BE MADE AVAILABLE TO THE AMATEUR RADIO SERVICE!!!

In a meeting held recently between AMSAT-PO officials and the PoSAT Consortium the schedule approved is as follows:

> EVERY minute PoSAT will be 5 seconds in the commercial frequencies and the remaining 55 seconds in the amateur frequencies. The Consortium feels that they need at lest 5 seconds to download the images. The telemetry will be downloaded in the amateur frequencies as well. This schedule will be valid starting on 07-JAN-94.

Since the amateurs aren't allowed to download the image files from the onboard cameras, there are the two experiments that will, however, be quite interesting. The are the following:

1) The onboard GPS receiver: if everything goes as expected, the days of difficult tracking are over. Just wait the AOS and the satellite will tell you were it is and where to point your antennas, if you know your QTH position.

2) The possibility of operation at 38.4 Kbps provided through the DSP system, which is will allow the amateurs to develope the necessary RF and digital techniques to go beyond 9600 baud. Imagine receiving about 100 Kbytes file in just 5 seconds!

PoSAT-1 will benefit mostly the amateurs that have 9600 baud operational capability and since there are only two of 9600 baud capable stations at the present time in Portugal operating regularly using these birds, your suggestions and comments would be most appreciated and might help AMSAT-PO in their contacts and negotiations with the PoSAT Consortium through AMSAT-PO.

The following are the PoSAT-1 radio amateur frequencies:

PoSat-1 Transponder Frequencies

UPLINK 145.975 MHz 145.925 MHz (Secondary)
DONWLINK 435.075 MHz 435.050 MHz (Secondary)

BBSCALL: posat-11 posat-12

[The AMSAT News Service (ANS) would like to thank Jose Carlos (CT1ERC) for this bulletin item. CT1ERC can receive your inquiries and comments on the BBS of KO-23 or at his INTERNET mailbox address of: J_CARDOSO%utad.pt@nunes.uminho.pt]

/EX
SB SAT @ AMSAT $ANS-008.02
MIR GETS A NEW CREW

HR AMSAT NEWS SERVICE BULLETIN 008.02 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 8, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-008.02

New Cosmonauts To Begin Stay on MIR

Today, 08-JAN-94, a Soyuz TM-18 spacecraft was launched from Baikonur at 10:08 UTC with three cosmonauts aboard. The new cosmonauts are Victor Afanassiev (U9MIR), Yuri Usachov (R3MIR), and Valery Poliakov (U3MIR). The TM-18 spacecraft is scheduled to dock with the MIR space station on 10-JAN-94. The cosmonauts that are currently aboard MIR,Vassili Tsybliev and Alexander Serebrov (R0MIR), will return to earth on 14-JAN-94.

What is interesting to note about U3MIR is that he will attempt to break Musa Manarov record for remaining in space. U3MIR is a medical doctor and will remain aboard MIR until April '95.

The new MIR QSL Manager is Serge Samburov (RV3DR). He has held that position since January '93. To receive a QSL confirming your MIR contact, send your QSL cards to his postal address of: P.O.BOX 73, Kaliningrad-10 City, Moscow Area, 141070, RUSSIA. Also, you can send your inquiries to the following packet radio address: RV3DR#R#MIR or RV3DR@RK3KP.#MSK.RUS.EU.

[The AMSAT News Service (ANS) would like to thank RV3DR and LW2DTZ for this for the information which went into this bulletin item.]

/EX
SB SAT @ AMSAT $ANS-008.03
STS-60 SAREX MISSION INFO

HR AMSAT NEWS SERVICE BULLETIN 008.03 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 8, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-008.03

Next SAREX Mission: STS-60

The STS-60 flight of the Space Shuttle Discovery represents the next Shuttle Amateur Radio Experiment (SAREX) mission. STS-60 is currently scheduled for launch on February 3, 1994 at 12:10 UTC. The primary payloads on-board STS-60 are the Wake Shield Facility and the second flight of the Spacehab, a pressurized module installed in the forward section of the Orbiter. The Spacehab science objectives are primarily micro-gravity oriented with emphasis on materials and life science.

The flight of STS-60 represents an historic first---the first joint U.S.-Russian Space Shuttle flight. This will be the first of several joint missions planned in preparation for the development of the international Space Station. Cosmonaut Sergei Krikalev, U5MIR, was chosen to be the first Russian to fly on the U.S. Space Shuttle. During the 8 day flight, Cosmonaut Krikalev will support the science operations on the Space Shuttle as Mission Specialist 4.

The SAREX operations on this flight include voice and packet. Preliminary discussions between the astronauts and the SAREX working group indicate that the Shuttle crew will be extremely busy with the numerous payloads on this flight. This information is being provided so the amateur community is aware that voice operations might be rare on this flight. Packet radio operations are expected when the crew is not engaged in voice operations. Please remember that this is a preflight prediction. The astronauts and the SAREX working group cannot guarantee this prediction. The following information sheet gives more details on SAREX operations for STS-60.

STS-60 Shuttle Amateur Radio Experiment (SAREX)
Information Sheet

Mission:STS-60 Space Shuttle Discovery
Wake Shield Facility & Spacehab-2 Mission

Launch: February 3, 1994, 12:10 UTC

Orbit: 57 degree inclination

Mission Length:8 days (Nominal)

Amateur Radio Operators: Charlie Bolden (License Pending), Ron Sega
(License Pending), Sergei Krikalev, U5MIR

Modes:FM Voice
Prime callsign: To be provided once Commander Bolden's callsign is known

Packet Radio: Callsign W5RRR-1

Frequencies: All operations in split mode. Do not transmit on
the downlink frequency.

Voice Freqs: Downlink: 145.55 MHz (Worldwide)
Uplinks: 144.91, 144.93, 144.95, 144.97,
144.99 MHz (Except Europe)
144.70, 144.75, 144.80 MHz (Europe only)

Note: The crew will not favor any specific uplink frequency, so your ability to work the crew will be the "luck of the draw."

Packet Freqs: Downlink: 145.55 MHz
Uplink: 144.49 MHz

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Info:   Goddard Amateur Radio Club, WA3NAN, Greenbelt Maryland,
        SAREX Bulletins and Shuttle Retransmissions
        3860 KHz, 7185 KHz, 14,295 KHz, 21,395 KHz, 28,650 KHz
        and 147.45  MHz (FM)

        Johnson Space Center ARC, W5RRR, Houston, Texas
        SAREX Bulletins 7225 KHz, 14,280 KHz, 21,395 KHz, 28,650 KHz, (SSB)
        and 146.64 MHz (FM)

        ARRL Amateur Radio Station, W1AW, Newington, CT
        SAREX News Bulletins: 3990, 7290, 14,290, 18,160, 21,390,
        and 28,590 KHz and 147.555 MHz (FM)

        Also, bulletins available on internet, via AMSAT ANS, Compuserve,
        and your local PBSS.

School Group Participation: 5 school groups will participate in SAREX with
                           pre-scheduled direct and telebridge contacts.
                           These include 4 in the U.S., and one in Russia.

Prelaunch Keplerian Elements: The following Keplerian Elements are provided by
                              Gil Carman (WA5NOM) at the Johnson Space Center
                              ARC:

Satellite: STS-58
Catalog number: 00058
Epoch time:      94024.67747791   =    (24-JAN-94 16:15:34.09 UTC)
Element set:     005
Inclination:       39.0114 deg
RA of node:       124.6663 deg           Space Shuttle Flight STS-58
Eccentricity:     .0007676              Prelaunch Element set JSC-005
Arg of perigee:   272.4217 deg          Launch:  24-JAN-94  14:53 UTC
Mean anomaly:      87.5676 deg
Mean motion:   15.96123499 rev/day           Gil Carman, WA5NOM
Decay rate:    1.19475e-03 rev/day*2      NASA Johnson Space Center
Epoch rev:               2
Checksum:              329

[The AMSAT News Service (ANS) would like to thank Frank Bauer (KA3HDO) for this
 bulletin item.]

/EX
SB SAT @ AMSAT   $ANS-008.04
AO-13 TRANSPONDER SCHEDULES

HR AMSAT NEWS SERVICE BULLETIN 008.04 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 8, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-008.04

G3RUH Provides AO-13 "Provisional" Transponder Operating Schedules For '94

The AO-13 Ground Command Station of G3RUH has provided the "best guess"
transponder schedules for the first half of '94.  Please take the following
schedules and paste them in a prominent place in your station.

AO-13 Provisional Mode Schedules 1994
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L QST *** AO-13 TRANSPONDER SCHEDULE ***  1994 Jan 31-Apr 04
Mode-B  : MA   0 to MA  90 |
Mode-BS : MA  90 to MA 120 |
Mode-S  : MA 120 to MA 145 |<- S transponder; B trsp. is OFF
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Mode-S  : MA 145 to MA 150 |<- S beacon only
Mode-BS : MA 150 to MA 180 |        Blon/Blat 180/0
Mode-B  : MA 180 to MA 256 |
Omnis   : MA 230 to MA  30 |  Move to attitude 240/0, Apr 04

L QST *** AO-13 TRANSPONDER SCHEDULE ***  1994 Apr 04-Jul 11
Mode-B  : MA   0 to MA 160 | OFF
Mode-B  : MA 160 to MA 220 |
Mode-S  : MA 220 to MA 230 |<- S transponder; B trsp. is OFF
Mode-BS : MA 230 to MA 250 |        Blon/Blat 240/0
Mode-B  : MA 250 to MA 256 |
Omnis   : MA 250 to MA 160 |  Move to attitude 180/0, Jul 11
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G3RUH also has provided a table to indicate what the Bahn longititude and latitude for AO-13 will be in the upcoming year. Again, this information should be considered as the "best guess" and placed in a prominent place in your ham shack.

AO-13 Provisional Attitude Schedule 1994-5

Date [Mon]	Blon	Blat	SA to SA	Weeks	Notes
1994 Jan 31	180	0	-36	35	9	
1994 Apr 04	240	0	-2	29	14	
1994 Jul 11	180	0	36	-33	9	
1994 Sep 12	230	0	0	-26	14	< Up to 132 minute eclipses
1994 Dec 19	180	0	-34	33	9	MA 96-107 Oct 22 - Nov 07
1995 Feb 20	230	0	12	21	14	
1995 May 29	180	0	30	-31	8	
1995 Jul 24	230	0	-10	-22	15	< Up to 132 minute eclipses
1995 Nov 06	180	0	-30	34	8	MA 96-103 Sep 05 - Sep 21
1996 Jan 01	230	0	9	--	--	

Note: SA stands for "Sun Angle"

Unfortunately, because AO-13's perigee height has decreased from 1500 KM to 420 KM, G3RUH is unsure about whether AO-13 will still be in orbit by the end of '95 and into early '96. But if AO-13 has not re-entered into the earth's atmosphere, the above Bahn longitiude and latitude values will be the planned values.

[The AMSAT News Service (ANS) would like to thank G3RUH for this bulletin item. G3RUH can be reached at G3RUH @GB7DDX.#22.GBR.EU]

/EX
SB SAT @ AMSAT $ANS-008.05
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 008.05 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 8, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-008.05

Weekly OSCAR Status Reports: 08-JAN-94

AO-13: Current Transponder Operating Schedule:

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L QST *** AO-13 TRANSPONDER SCHEDULE ***  1993 Dec 27-Jan 31
Mode-B  : MA   0 to MA 180 | OFF
Mode-B  : MA 180 to MA 220 |
Mode-S  : MA 220 to MA 230 |<- S transponder; B trsp. is OFF
Mode-BS : MA 230 to MA 250 |        Blon/Blat 240/-5
Mode-B  : MA 250 to MA 256 | OFF
Omnis   : MA 250 to MA 150 |  Move to attitude 180/0, 31-Jan-94
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Poor Sun angle and battery testing need maximum OFF time.
[G3RUH/DB2OS/VK5AGR]

FO-20: The following is the current FO-20 operating schedule:
From January '94 thru February '94, the analog mode and the
digital mode will be on alternately for a week at a time.
ANALOG MODE:
12-JAN-94 7:30 -TO- 19-JAN-94 7:50 UTC
26-JAN-94 8:20 -TO- 02-FEB-94 6:50 UTC
09-FEB-94 7:15 -TO- 16-FEB-94 7:40 UTC
DIGITAL MODE: Unless otherwise noted above. [JJ1WTK]

AO-16: Operating normally. [WH6I]

LO-19: Operating normally. [WH6I]

KO-23: Up and running. Busy as usual. [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX